MIAMI-DADE COUNTY
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

Thybar Corporation
913 South Kay Avenue
Addison, IL 60101

SCOPE:
This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER- Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: TC-5 Series Steel Roof-Curb for Trane Rooftop Units

APPROVAL DOCUMENT: Drawing No. RC10260.idw, titled " Roof curb by Thybar Corporation ", sheets 1 through 5 of 5, prepared by Paul Selman, P.E., dated February 19, 2010, last revision #7 dated May 15, 2013, signed and sealed by Paul Selman, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: None

LABELING: Each roof-curb shall bear a permanent label with the manufacturer's name or logo, Addison, IL; Farmers Branch, TX; Akron, OH; Louisville, KY; or McCarran, NV and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA # 10-0317.03** and consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above.
The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**

MIAMI-DADE COUNTY APPROVED

Helmy A. Makar
05/30/2013

NOA No. 12-0828.02
Expiration Date: 02/10/2016
Approval Date: 05/30/2013

Thybar Corporation

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 10-0317.03

A. DRAWINGS

1. Drawing No. RC10260.idw, titled " Roofcurb by Thybar Corporation ", sheets 1 through 5 of 5, prepared by Paul Selman, P.E., dated February 19, 2010, last revision #4 dated January 11, 2011, signed and sealed by Paul Selman, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Calculation titled " 146 MPH Wind Load Calculation ", dated November 19, 2010, 1 sheet, signed and sealed by Paul J. Selman, P.E.

2. Calculation titled " 146 MPH Wind Load FBC 2007", dated February 25, 2010, sheets 1 through 90 of 90, signed and sealed by Paul J. Selman, P.E.

D. QUALITY ASSURANCE

1. By Miami-Dade County Building and Neighborhood Compliance Department.

E. MATERIAL CERTIFICATIONS

1. None.

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. RC10260.idw, titled " Roof curb by Thybar Corporation ", sheets 1 through 5 of 5, prepared by Paul Selman, P.E., dated February 19, 2010, last revision #7 dated May 15, 2013, signed and sealed by Paul Selman, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Calculation titled "Maximum sized Carrier Curb to Structure Bolt Analysis", dated May 16, 2013, one sheet, signed and sealed by Paul J. Selman, P.E.

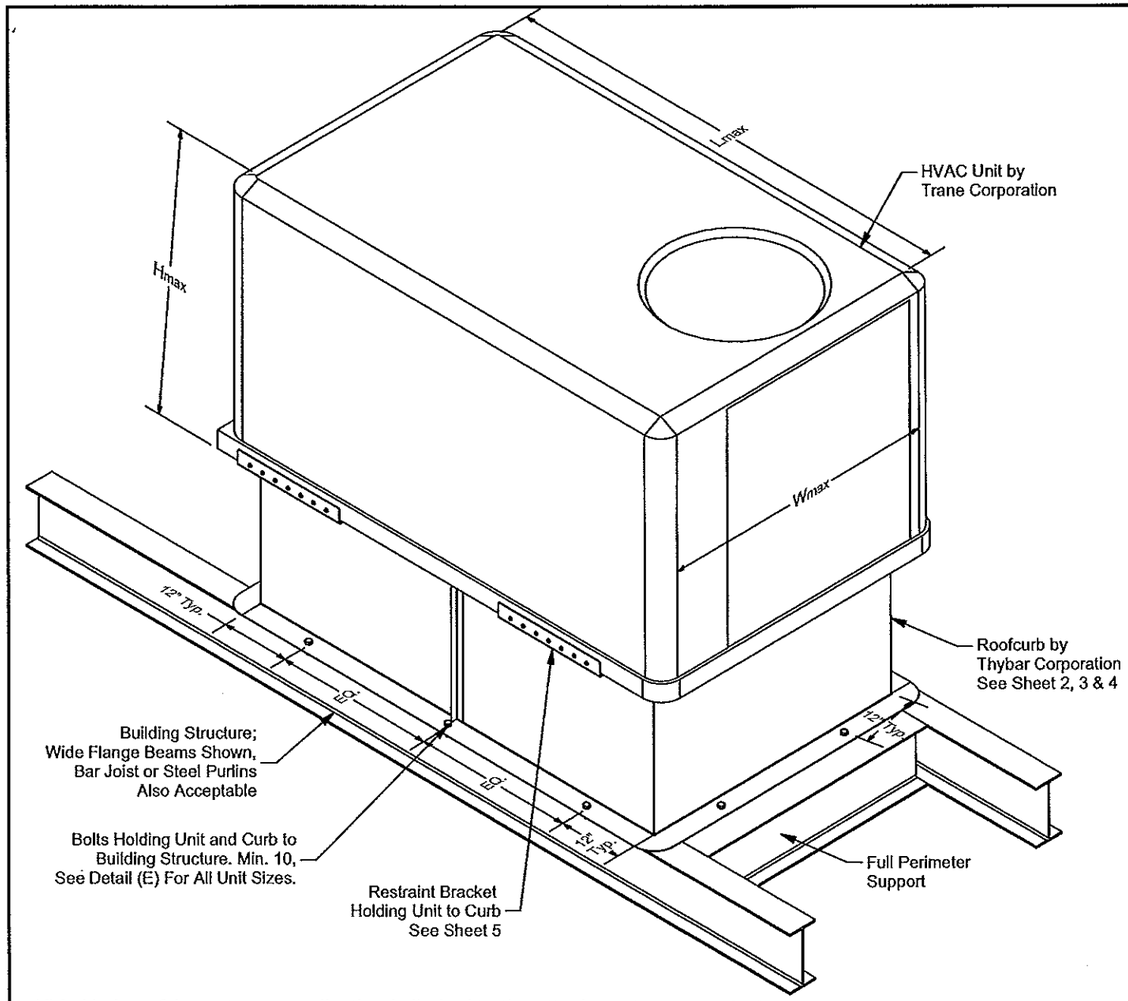
D. QUALITY ASSURANCE

1. By Miami-Dade County Department of Regulatory and Economic Resources.

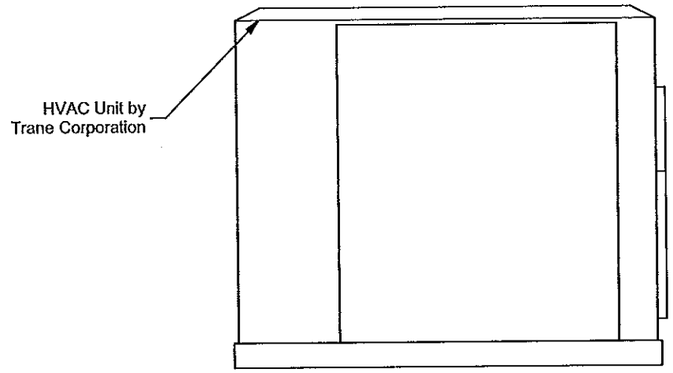
E. MATERIAL CERTIFICATIONS

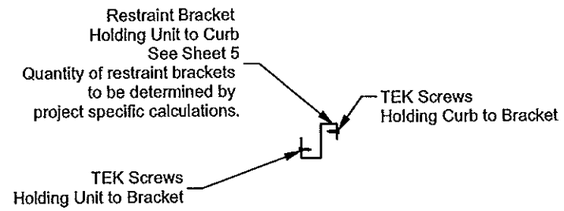
1. None.

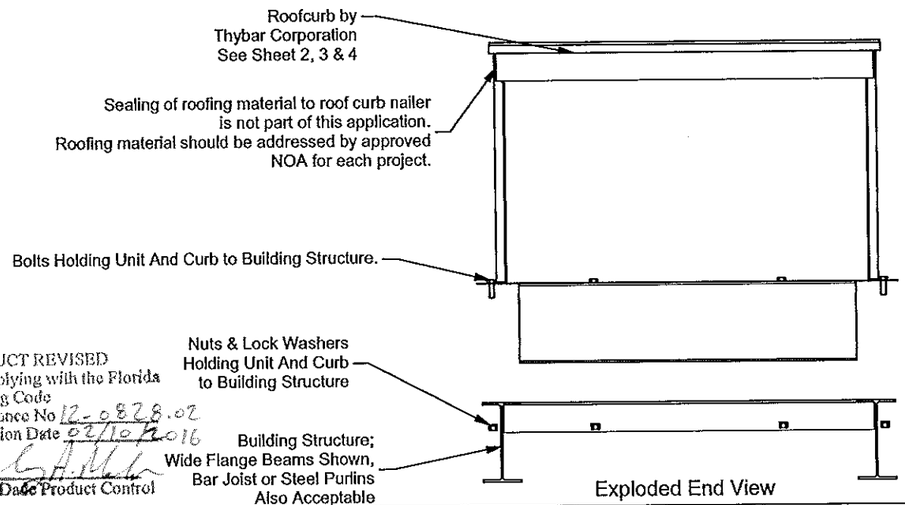
Helmy A. Makar, P.E., M.S.
Product Control Unit Supervisor
NOA No. 12-0828.02
Expiration Date: 02/10/2016
Approval Date: 05/30/2013



Unit Dimensions		
Lmax	Wmax	Hmax
99.6875"	63.1875"	50.875"







Exploded End View

This Notice of Acceptance application is limited to the attachment of the HVAC unit to the roof curb, the roof curb itself and the attachment of the roof curb to the roof structure.

Therefore, the restraint system shown in these drawings will be acceptable for all Trane units with the following model numbers:
YSC036E-060E,YHC036E,TSC036E-060E,THC036E,WSC036E-048E, YSC072E-120E,YHC048E-072E,TSC072E-120E,THC048E-072E, YHC092E-120E,THC092E-120E

General Notes:

1) These drawings provide a method of attachment so that a Trane Corporation manufactured HVAC unit will be able to resist the force generated by a wind when the unit is installed on a Thybar Corporation manufactured roofcurb as required by the latest version of the Florida Building Code (FBC).

2) The following analysis is being submitted to the Miami-Dade County Product Control Section for review and consideration in assigning a Notice of Acceptance (NOA) for Trane units installed on Thybar Corporation roofcurbs and restraint brackets.

3) The design pressures as determined from Section 1620 of FBC, 2010 Edition and ASCE 7-10 must be multiplied by 0.6

Max lateral pressure 161.1 (psf), Max uplift pressure 78 (psf)

Analysis:

1) The design wind load for a rooftop-mounted HVAC unit was determined following the requirements of FBC2010 Section 1609.1.1 and Section 29.5 of The American Society of Civil Engineers Standard 7 (ASCE7-10).

2) Static analysis was used to ensure that all components between the rooftop-mounted HVAC unit and the building structure are of sufficient strength.

a) The load path from the rooftop equipment to the building structure is of sufficient strength to keep the equipment in place while resisting the tension, shear, moment and uplift forces generated by the wind force acting on the rooftop equipment.

b) The rooftop unit restraints, the roofcurb wall and the curb attachments to the building structure were all designed and manufactured with the ability to safely transfer the wind-generated force into the building structure.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0828.02
Expiration Date 02/10/2016
By
Miami Dade Product Control

Paul Selman Florida P.E. 65313
913 S. Kay Avenue
Addison IL 60101 05/16/13

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
2	Per H. Makar Comments	7/28/10	PSelman
3	Per H. Makar Comments	11/19/10	PSelman
4	Per H. Makar Comments	1/11/11	TAmbrosini
5	Revised per FBC2010 Requirements	12/10/2012	TAmbrosini
6	Per H. Makar Comments	2/11/2013	TAmbrosini
7	Per H. Makar Comments	5/15/2013	TAmbrosini

Thybar Corporation

Qty:	Job # :	Tag:
Dwg. RC10260.idw	By: Mike Lissak	Date: 2/19/2010

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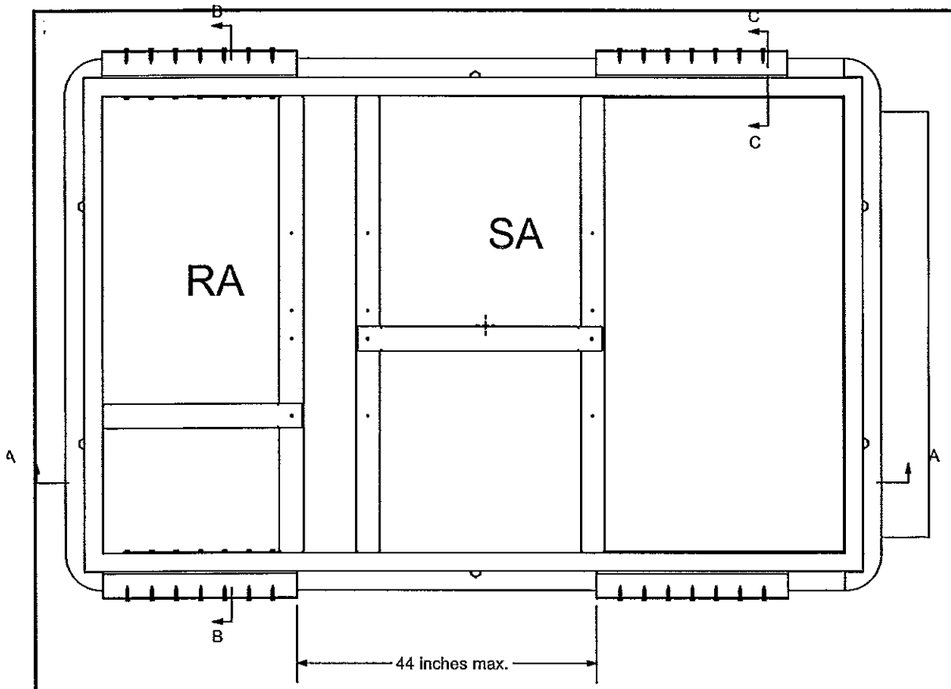
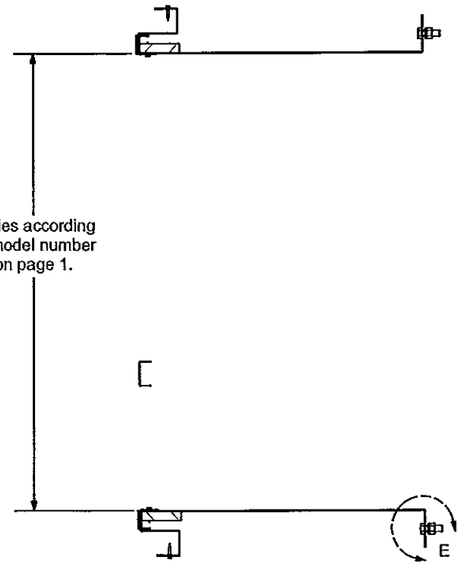
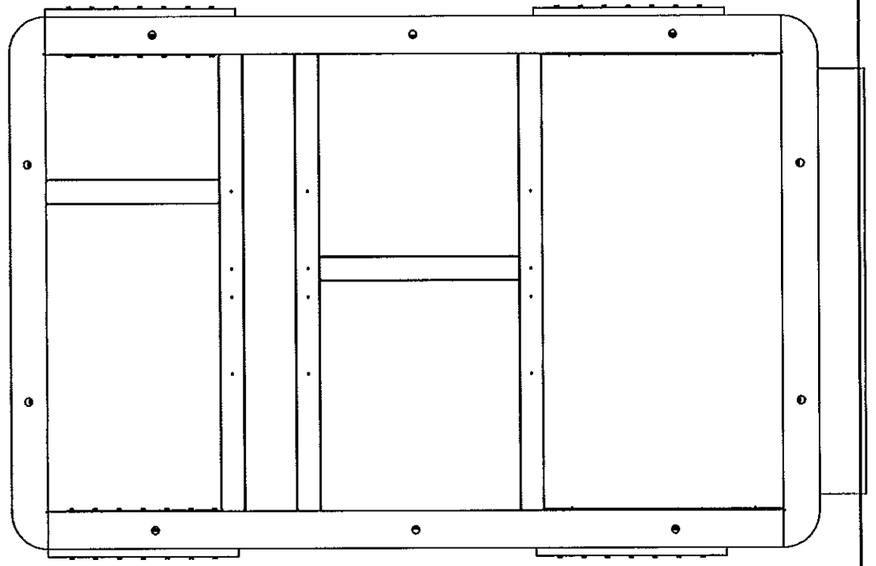
ThyCurb



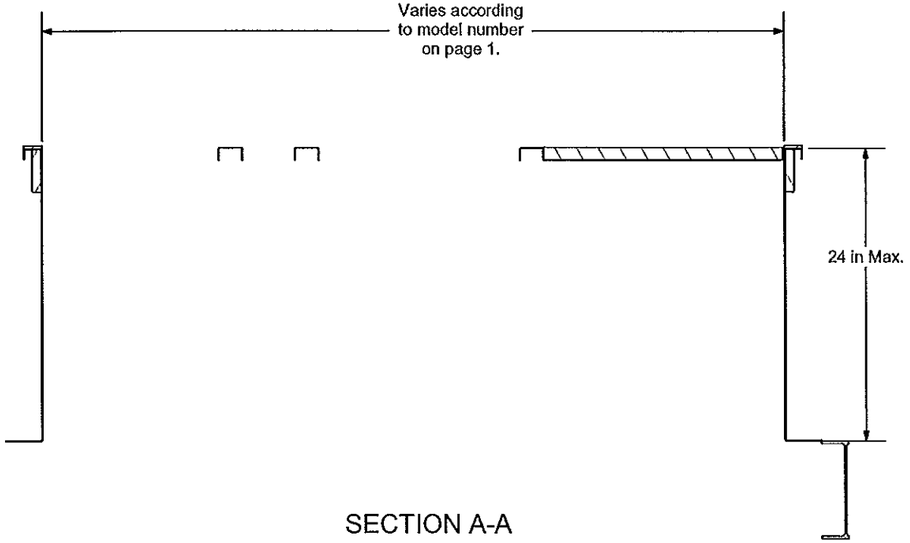
Plan view



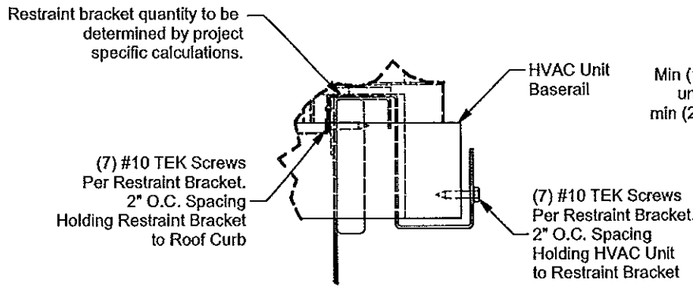
SECTION B-B



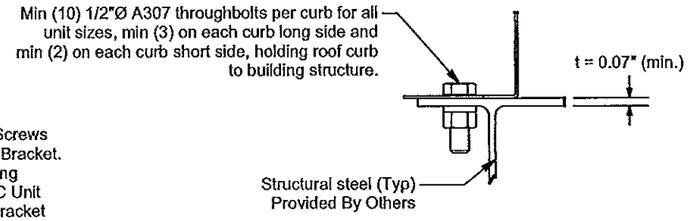
Bottom View



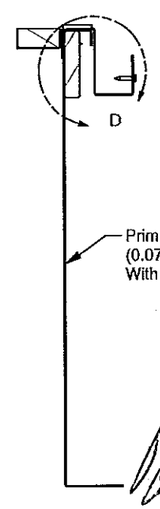
SECTION A-A



DETAIL D



DETAIL E



SECTION C-C

PRODUCT REVISED
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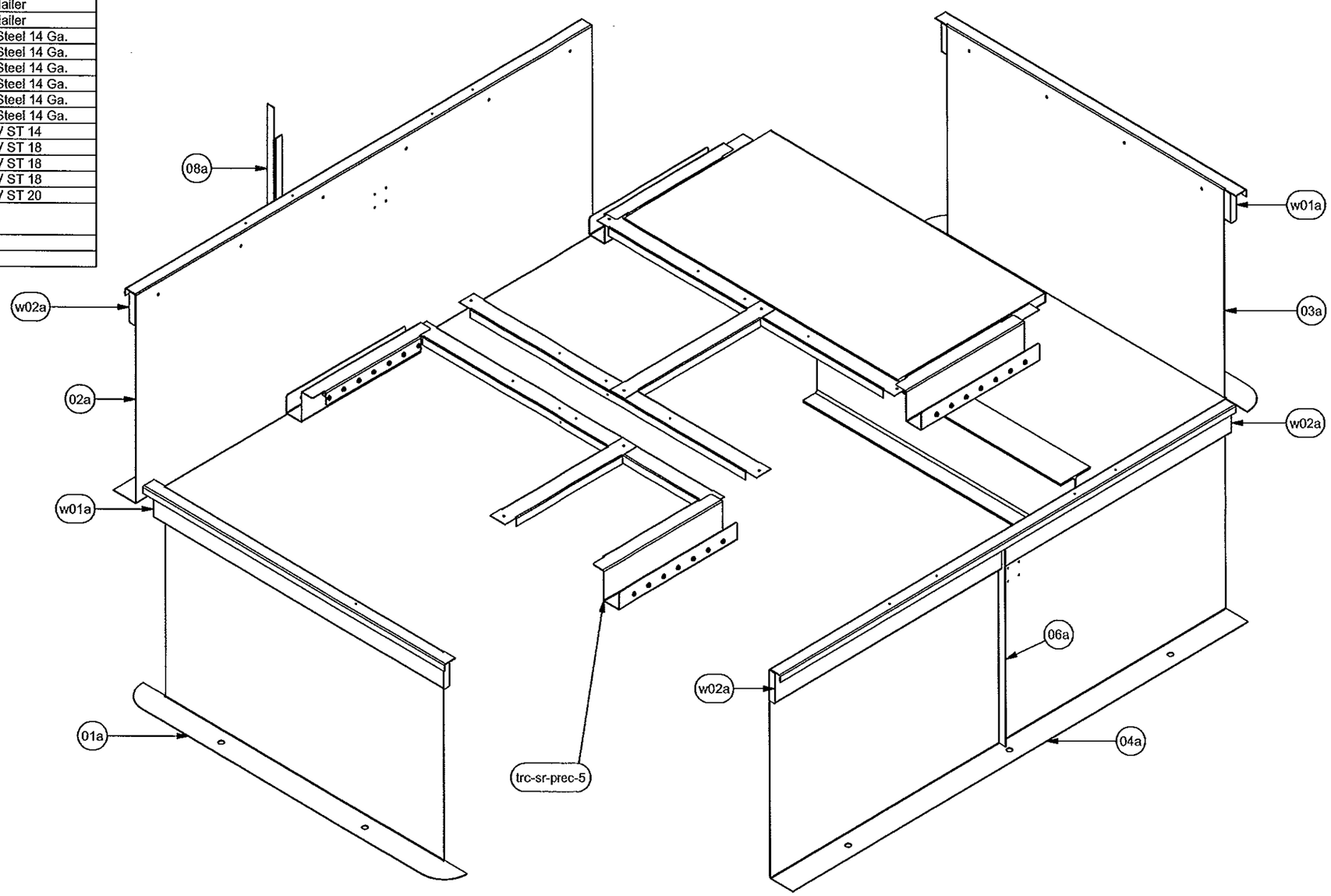
Expiration Date 08/16/2016
By
Miami Dade Product Control

Paul Selman Florida P.E. 65313
913 S. Kay Avenue
Addison IL 60101 05/16/13

Send 25 ft. of 1/4 x 1 1/2 Gasketing/Curb

Thybar Corporation			ThyCurb
Qty:	Job # :	Tag:	
Dwg. RC10260.idw	By: Mike Lissak	Date: 2/19/2010	
D:\Inventor\Thybar Vault\Drawings\Logged Drawings\RC-Roof Curbs\RC10251-RC10500\RC10260\RC10260.idw			Sheet 2 of 5

Part	Description	Material
w01a	end nailer	1X4 Wood Nailer
w02a	side nailer	1X4 Wood Nailer
01a	curb wall 1	Prime Galv Steel 14 Ga.
02a	curb wall 2	Prime Galv Steel 14 Ga.
03a	curb wall 3	Prime Galv Steel 14 Ga.
04a	curb wall 4	Prime Galv Steel 14 Ga.
06a	angle stiffener 2	Prime Galv Steel 14 Ga.
08a	angle stiffener 4	Prime Galv Steel 14 Ga.
trc-sr-prec-5	Restraint Bracket	PRIMEGALV ST 14
TR5DS00512-03	SUPPLY CHANNEL	PRIMEGALV ST 18
TR5DS00512-02	RETURN CHANNEL	PRIMEGALV ST 18
TR5DS00512-01	CHANNELS	PRIMEGALV ST 18
TR5DS00512-04	RECESSED PAN	PRIMEGALV ST 20
10-16x1 self drilling	Hex washer Head Zinc 10-16x1 self drilling	Screw
TR5DS00512-D01	Recess Pan	INSUL D 1



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Thybar Corporation			
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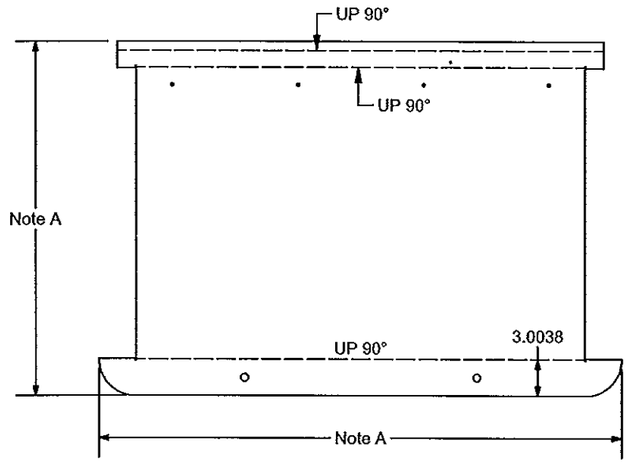
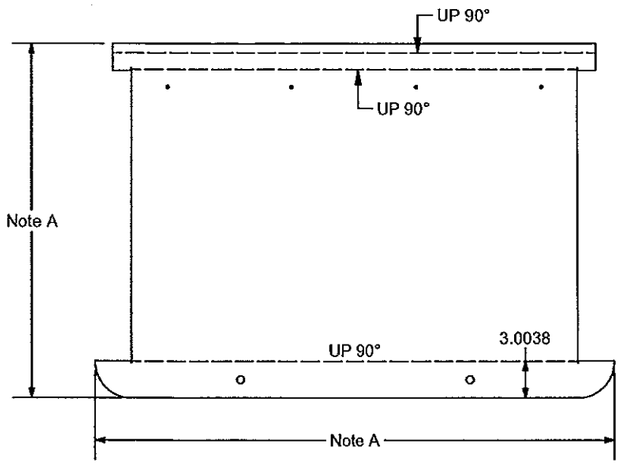
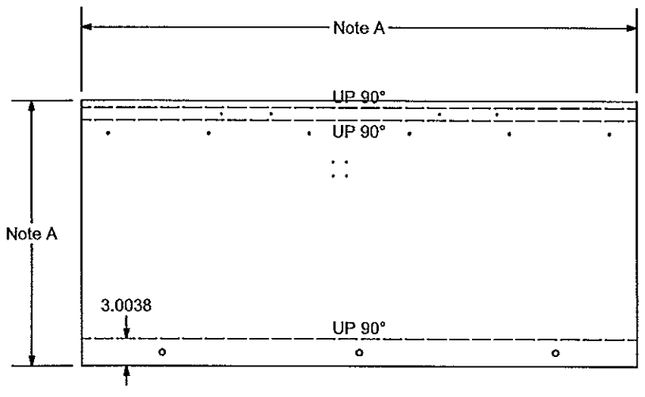
ThyCurb



01a - 1



03a - 1



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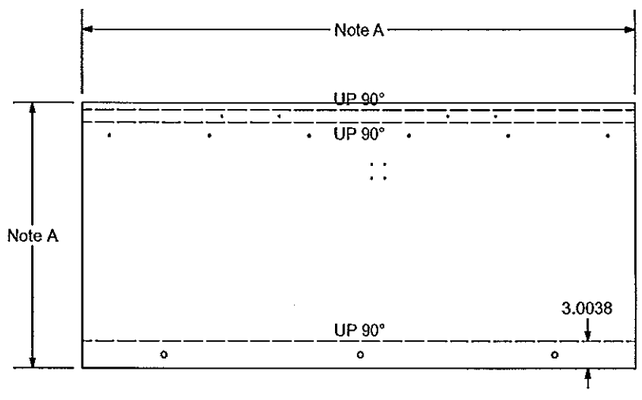
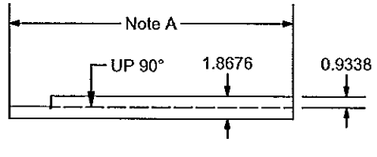
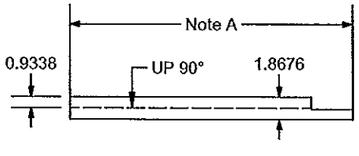


04a - 1

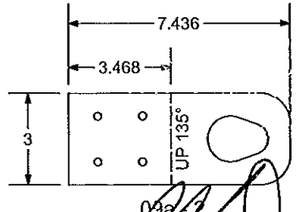
Note A
Varies according to
model number on page 1.



06a - 1



08a - 1



09a - 1

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05/16/13

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Qty:	Job # :	Tag:	
Dwg. RC10260.idw	By: Mike Lissak	Date: 2/19/2010	
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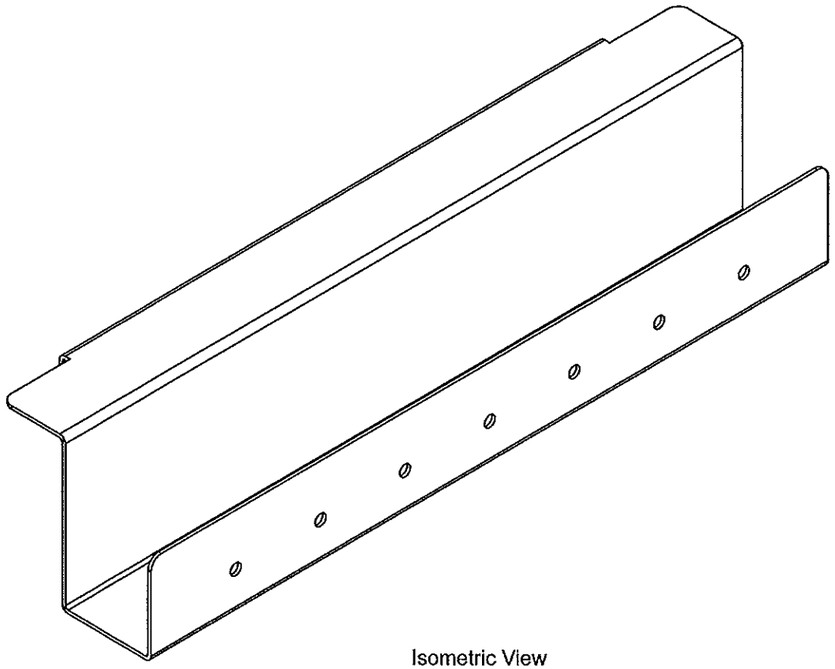
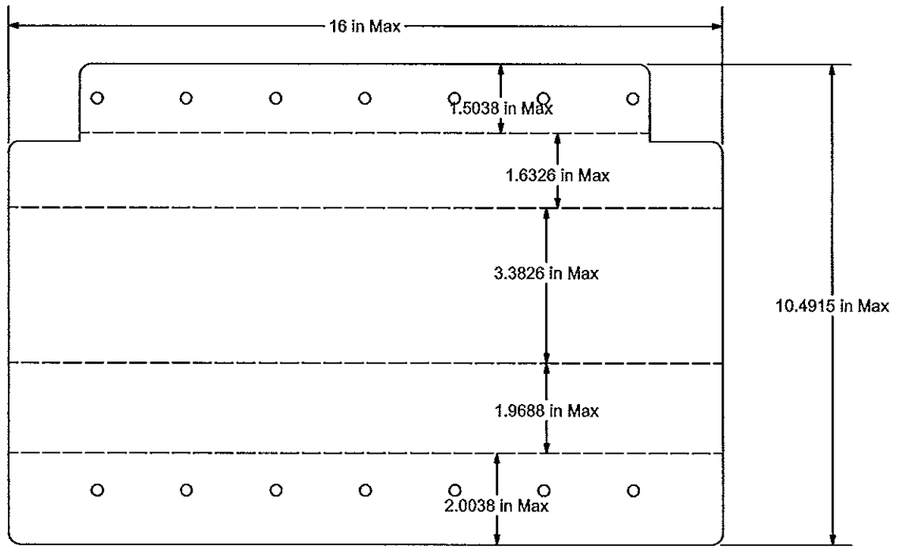
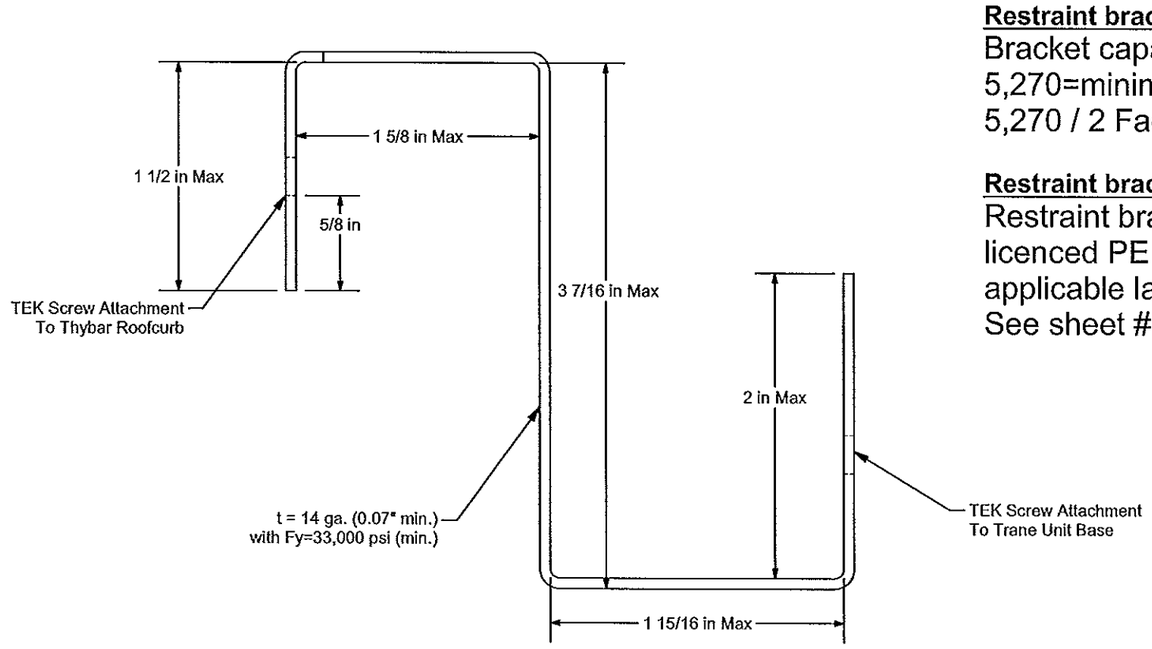
ThyCurb



Isometric View



Flat Pattern



Formed View

Restraint bracket capacity

Bracket capacity is the minimum of bracket shear and tensile capacities with a factor of safety = 2.0.
5,270=minimum of 8,445 and 5,270
5,270 / 2 Factor of Safety = 2,635 lb

Restraint bracket quantity

Restraint bracket quantity is determined by project specific calculations, performed by a Florida licenced PE or Florida registered Architect, that consider the unique combination of unit size and applicable lateral and uplift pressures for each specific job.
See sheet #1 for maximum unit size and maximum uplift and lateral pressures.

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D:\Inventor\Thybar Vault\Drawings\Logged Drawings\RC-Roof Curbs\RC10251-RC10500\RC10260\RC10260.idw			ThyCurb